

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1 and 4-17 are pending, Claims 1, 9, 15, and 17 having been amended by way of the present amendment.

In the outstanding Office Action Claims 1 and 4-15 were rejected under the judicially created doctrine of obviousness-type double patenting over U.S. Patent No. 6,695,477; and Claims 1 and 4-17 were rejected as being unpatentable over Yamamoto et al. (U.S. Patent No. 5,056,145, hereinafter “Yamamoto”) in view of Yoshimura et al (US Patent No. 4,764,965, hereinafter, Yoshimura), and Shirai (JP 62-168199, hereinafter Shirai).

In reply, a terminal disclaimer is filed herewith.

Amended Claim 1 is directed to a portable audio signal recording and reproducing apparatus. It includes a memory unit that stores compressed audio data that was compressed via high-efficiency compression processing; a decoder that decodes the compressed data; a D/A converter that converts the decoded output signal into at least one analog signal; and first and second headphone driven units configured to receive the at least one audio signal and produce left and right audio channel sounds. Finally, the apparatus includes an input unit that has a plurality of user-actuated interfaces that respectively trigger different functions when actuated.

Claim 1 was amended to add an encoder that is configured to compress audio data via a high-efficiency compression process in accordance with a coding model of a human auditory sense. Support for the amendment is found throughout the specification, for example the encoder 33 at Figure 1, which is shown in more detail at Figure 3 and the corresponding text, such as at page 8, discussing the encoding of the signal accounting for human auditory characteristics. The present inventors realized the advantages of taking the

human auditory response into consideration since encoding can be more efficient. For example, the inventors realized that the human auditory sense is sensitive to amplitude (or power), but not phase (see, e.g., specification at page 9). Furthermore, as explained at page 10, the spectral shaping of the encoded audio data is able to take advantage of the allocation of bits dedicated to the encoding process by allocating fewer bits to the higher frequencies (for example).

The outstanding Office Action asserts that Yamamoto discloses all of the elements of Claim 1, except for (1) the inclusion of signal compression and decompression of stereo audio data using a high efficiency compression method, and (2) the use of left and right driven units. The Office Action attempts to cure these deficiencies by combining Yamamoto, with the compression algorithm of Yoshimura, and the left and right headphone speakers in Shirai.

However, both Yamamoto and Yoshimura are directed to purely pragmatic implementations of recorded voice data, where rudimentary reproduction of the voice is sufficient for the intended purpose. For example, Yamamoto is directed to a device where digitized sound data is used for recording and playing back foreign language sentences used for training people who are trying to learn a new language. Yoshimura is directed to a non-portable device that records speech that can be played back when a map or other display device is selected by a user. Neither Yamamoto nor Yoshimura describe anything about high efficiency compression of the audio data. Nevertheless, to further emphasize the difference between the presently claimed invention and the asserted prior art, Claim 1 has been amended to expressly include an encoder configured to compress audio data via a high-efficiency compression process in accordance with a coding model of a human auditory sense. Neither Yamamoto nor Yoshimura include this feature, nor would these references benefit from the

addition of this claimed feature because they are directed toward basic voice recording applications.

Shirai does not cure the deficiencies with Yamamoto and Yoshimura. Therefore, no matter how Shirai is combined with Yamamoto and Yoshimura, the combination does not teach all of the elements of amended Claim 1.

Although of differing statutory class and/or scope, Claims 4-17, as amended, are believed to patentable define over the asserted for substantially the same reasons discussed above with respect to amended Claim 1.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1 and 4-17, as amended, is patentably distinguishing over the prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable decision to that effect is respectfully requested.

Respectfully submitted,

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